ABSTRACT

Background: Oral submucous fibrosis (OSF) is a chronic, progressive, potentially malignant disorder of oral mucosa associated with areca nut chewing. It is of interest to develop markers which could detect early genetic changes in OSF& facilitates early detection of malignant transformation. p63, a member of p53 family is expressed in malignant lesions. The role of p40 (antibody raised against ΔNp63) has been infrequently studied in malignant transformation of OSF.

Aim and Objective: To study and compare the expression of ΔNp63 in OSF, in those cases in which OSF has progressed to oral squamous cell carcinoma (OSCC) and in normal mucosa.

Materials and methods: In this cross section study, tissue sections of OSF (n = 10), OSCC arising in the background of OSF (n = 16), and normal oral mucosa (n = 6) were stained with ΔNp63 antibody by immunohistochemistry. Expression of ΔNp63 was evaluated for the percentage of positively expressed cells, staining intensity and tissue localised among the study groups. It was compared using chi square test. p value ≤ 0.05 was considered statistically significant.

Results: An increased and similar nuclear labelling index of ΔNp63 was noted in OSF and OSCC with history of OSF when compared to normal mucosa. In OSF cases, 30% showed 51% to 75% positivity and 40% showed > 75% positivity. In OSCC cases, 37.5% exhibited 51 - 75% positivity while 62.5% exhibited >75 % positivity.Increased staining intensity of ΔNp63 was noted in OSF and OSCC arising in OSF when compared to normal mucosa.There is a difference in the increased intensity of the OSCC(87.5% showed intense staining) compared to OSF (40% showed moderate staining and 50% showed intense staining) though it is not statistically significant.

Conclusion: There is no significant association between the qualitative expression of ΔNp63 (p40 clone) in malignant transformation of OSF. To validate the role of ΔNp63 in malignant transformation of OSF, large number of cases and quantitative assessment of ΔNp63 mRNA expression by RT-PCR should be done in further research.

Key words: ΔNp63, p40, OSF, OSCC